STATE OF CALIFORNIA

ENVIRONMENTAL PROTECTION AGENCY

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

In the Matter of: Santa Susana Field Laboratory Simi Hills Ventura County, California CA1800090010 (NASA) The United States National Aeronautics and Space Administration (Respondent)	)	Docket No. **HSA-CO 10/11 - 038** ADMINISTRATIVE ORDER ON CONSENT FOR REMEDIAL ACTION Health and Safety Code Sections 25355.5(a)(1)(B), 58009 and 58010

1.0. INTRODUCTION

1.1. Parties. The California Department of Toxic Substances Control ("DTSC") and the United States National Aeronautics and Space Administration, a federal agency ("NASA" or "Respondent") (collectively "The Parties") enter into the following Administrative Order on Consent ("Order").

1.2. Site. This Order applies to two portions of the Santa Susana Field Laboratory site ("SSFL") known as Area II and the portion of Area I owned by the federal government and administered by NASA, hereinafter referred to as the "Site." The entirety of SSFL is located in the Simi Hills in southeastern Ventura County, as shown in Attachment A. The Simi Hills are bordered to the east by the San Fernando Valley and to the north by the Simi Valley. The SSFL is located approximately three miles south of the San Fernando Valley Freeway (118) and approximately five miles north of the Ventura Freeway (101).

1.3. Authority of DTSC. DTSC issues this Order under the provisions of Section 25355.5(a)(1)(B) of the California Health and Safety Code, and pursuant to DTSC's general grant of authority in Sections 58009 and 58010 of the California Health and Safety Code.

1.4. Consent Order for Corrective Action (2007).

1.4.1. This Order shall not in any way operate to modify, amend or nullify the obligations of the Parties under the 2007 Consent Order for Corrective Action (Department Docket No. P3-07/08-003, hereinafter "2007 Order"), entered into by DTSC, NASA, the Department of Energy ("DOE"), and the Boeing Company ("Boeing"). The purpose of this Order is to further define and make more specific NASA's obligations with respect to the cleanup of soils at the Site. Compliance with and fulfillment of this Order shall, upon completion, satisfy NASA's responsibilities regarding soils at the Site and NASA's obligations and responsibilities in this Order supersede the 2007 Order requirements pertaining to soils cleanup. The 2007 Order requirements pertaining to NASA for soils contamination at the Site shall not be applied to NASA. All other provisions of the 2007 Order remain in effect as to NASA, including provisions relating to ground water contamination and soil vapor emanating from groundwater, and shall remain in full force and effect.

1.4.2. With respect to groundwater, utilizing the authority of this Order, the procedures of the 2007 Order will be applied to the investigation, characterization and remediation of any radiological contaminants that may have impacted groundwater. The investigation, characterization and remediation of groundwater

conducted under the procedures of the 2007 Order shall, to the extent practicable, be coordinated with activities conducted under this Order.

1.5. Compliance with State Law. DTSC agrees that compliance with this Order and the 2007 Order shall constitute NASA's full and complete compliance with all applicable provisions of Chapters 6.5 and 6.8 of Division 20 of the California Health and Safety Code (the California Hazardous Waste Control Law, Sections 25100 *et seq.* of that Code, and the California Hazardous Substances Account Act, Sections 25300 *et seq.* of that Code), including specifically, but not limited to, California Senate Bill 990 (Stats. 2007, c. 729), which has been codified as Section 25359.20 of the California Health and Safety Code, but only with respect to the application of these provisions to radiologic or chemical contamination of soil at the Site or any contiguous radiologic or chemical contamination of soil emanating from within Area II and the portion of Area I owned by NASA, within or without the SSFL boundaries, identified by DTSC as part of the investigation of chemical contaminants.

1.6. Agreement in Principle. On September 3, 2010, the Parties agreed to a Joint Settlement Framework in a document entitled "Final Agreement in Principle" (AIP), which is incorporated as Attachment B. The Parties agree that NASA's cleanup obligations with respect to soil contamination at the Site shall be conducted in accordance with and be governed by the AIP, as further defined in this Order.

1.7. Definition of Terms. In addition to the definition of terms in Section 1.4 of the 2007 Order, the following terms shall be defined as specified:

1.7.1. “Cleanup of soils” shall mean the cleanup of soils that contain chemical and/or radiological contaminants in or on soils above their respective cleanup standards as specified in the AIP. “Cleanup of soils” does not include the cleanup of volatile organic contaminants that are found in the groundwater or in the soil or bedrock below the groundwater level, nor does it include the cleanup of volatile organic contaminants that emanate from groundwater contaminated with volatile organic contaminants that migrate into and through the saturated and unsaturated soil and bedrock at the Site.

1.7.2. “Cleanup to Background Levels” means removal of soils contaminated above local background levels.

1.7.2.1. “Cleanup to Background Levels” shall include in situ or other onsite treatment of soils that is able to achieve the cleanup standards as specified in the AIP.

1.7.2.2. “Cleanup to Background Levels” does not include “leave in place” alternatives.

1.7.2.3. “Cleanup to Background Levels” does not include onsite burial or landfilling of contaminated soil.

1.7.3. “Detection Limits” means the following:

1.7.3.1. For chemical contaminants, “detection limit” means method reporting limit (or MRL), which is the lowest concentrations at which an analyte can be confidently detected in a sample and its concentration can be reported with a reasonable degree of accuracy and precision.

1.7.3.2. For radiological contaminants, “detection limit” means minimum detectable activity (or MDA), which is defined as the smallest amount of activity that can be quantified for comparison with regulatory limits.

1.7.4. “Soils” shall mean saturated and unsaturated soil, sediment, and weathered bedrock, debris, structures, and other anthropogenic materials. “Soils” does not include surface water, groundwater, air, or biota.

2.0. WORK TO BE PERFORMED

2.1. Remediation Goal. The cleanup of soils at the Site shall result in the end state of the Site after cleanup to be consistent with “background.” That is, at the completion of the cleanup, no contaminants shall remain in the soil above local background levels, with the exception of the exercise of the exemptions that are specifically expressed in the AIP. All response actions taken pursuant to this Order shall be performed so as to accomplish this objective, in full compliance with the terms and conditions detailed in the AIP, and in accordance with workplans that have been submitted to and approved by DTSC. Similarly, to the extent any radiological materials are determined to be present at this portion of the Site, the cleanup of soils at the Site contaminated with radiological materials shall result in no radiological contaminants remaining in the soil above local background levels, with the exception of the exercise of the same exemptions expressed in the AIP.

2.2. Investigation and Remediation Areas. As a result of previously conducted assessments performed under the authority of the Resource

Conservation and Recovery Act (RCRA) and the State Hazardous Waste Control Law, the Site has been divided into areas separately and uniquely named. The activities being conducted under the provisions of this Order are being conducted under the requirements in Chapter 6.8 of the California Health and Safety Code. However, the names of those areas and the geographic descriptions and boundaries of those areas are to be retained for the sake of continuity.

(a) RFI Group 2
(b) RFI Group 3
(c) RFI Group 4

2.3 Building Demolition Activities.

2.3.1 Within 90 days of the effective date of this Order, NASA shall submit to DTSC for its review and approval a draft demolition plan, demolition schedule and detailed procedure that describe the activities that NASA shall perform to sample and characterize NASA's remaining buildings to determine whether they are contaminated with radiological or chemical contaminants, and to determine appropriate handling methods for managing and disposing of demolition debris. NASA, in developing its demolition schedule, shall ensure that demolition activities are completed prior to the conclusion of the Remedial Investigation Activities identified in Section 2.4.

2.4. Remedial Investigation Activities. Within [90] days from the effective date of this Order, NASA shall prepare and submit to DTSC for review and approval a detailed Remedial Investigation Workplan and implementation schedule which covers all the activities necessary to complete the

characterization of the nature and extent of chemical and radiological contamination at the Site.

The Remedial Investigation Workplan shall include a detailed description of the tasks to be performed, information or data needed for each task, and the deliverables which will be submitted to DTSC. The Remedial Investigation Workplan shall include all of the following Sections:

2.4.1 Field Sampling Plan. The Field Sampling Plan shall include:

(1) Sampling objectives, including a brief description of data gaps and how the field sampling plan is to address these gaps;

(2) Sample locations, including a map showing these locations, and proposed frequency;

(3) Sample designation or numbering system;

(4) Detailed specification of sampling equipment and procedures;

(5) Sample handling and analysis including preservation methods, shipping requirements and holding times; and

(6) Management plan for wastes generated.

2.4.2 Quality Assurance Project Plan. The plan shall include:

(1) Project organization and responsibilities with respect to sampling and analysis;

(2) Quality assurance objectives for measurement including accuracy, precision, and method detection limits.

(3) Sampling procedures;

(4) Sample custody procedures and documentation;

(5) Field and laboratory calibration procedures;

(6) Analytical procedures;

(7) Any laboratories to be used must be certified pursuant to Health and Safety Code Section 25198;

(8) Specific routine procedures used to assess data (precision, accuracy and completeness) and response actions;

(9) Reporting procedure for measurement of system performance and data quality;

(10) Data management, data reduction, validation and reporting. Information shall be accessible to downloading into DTSC's system; and

(11) Internal quality control.

2.4.3 Health and Safety Plan. A site-specific Health and Safety Plan shall be prepared in accordance with federal regulations (29 CFR 1910.120) and State regulations (Title 8 CCR Section 5192). This plan should include, at a minimum, the following elements:

(1) Site Background/History/Workplan;

(2) Key Personnel and Responsibilities;

(3) Job Hazard Analysis/Summary;

(4) Employee Training;

(5) Personal Protection;

(6) Medical Surveillance;

(7) Air Surveillance;

(8) Site Control;

(9) Decontamination;

(10) Contingency Planning;

(11) Confined Space Operations;

(12) Spill Containment;

(13) Sanitation;

(14) Illumination; and

(15) Other applicable requirements based on the work to be performed.

All contractors and all subcontractors shall be given a copy of the Health and Safety Plan prior to entering the Site. Any supplemental health and safety plans prepared by any subcontractor shall also be prepared in accordance with the regulations and guidance identified above. The prime contractor shall be responsible for ensuring that all subcontractor supplemental health and safety plans shall follow these regulations and guidelines.

2.4.4 Remedial Investigation Workplan Implementation. Upon DTSC's approval, NASA shall implement the approved Remedial Investigation Workplan under DTSC's oversight.

2.4.5 Remedial Investigation Workplan Revisions. If NASA proposes to modify any methods or initiates new activities for which no Field Sampling Plan, Quality Assurance Project Plan, Health and Safety Plan or other necessary procedures/plans have been established, NASA shall prepare an addendum to

the approved plan(s) for DTSC review and approval prior to modifying the method or initiating new activities.

2.5 Treatability Studies. To the extent NASA considers the use of in situ treatment technologies or methods to achieve the cleanup levels specified in the AIP, NASA shall conduct treatability testing to develop data for assessing treatment in place that could achieve the cleanup goals. Treatability testing is required to demonstrate the implementability and effectiveness of such technologies, unless NASA can show DTSC that similar data or documentation or information exists. The required deliverables are: a workplan, a sampling and analysis plan, and a treatability evaluation report. To the extent practicable, treatability studies shall be proposed and implemented during the latter part of Remedial Investigation.

2.6 Chemical and Radiological Data Summary Reports.

2.6.1. NASA shall prepare and submit a Chemical Data Summary Report to DTSC for review and approval in accordance with the approved Remedial Investigation Workplan schedule. The Chemical Data Summary Report shall contain a summary of the entirety of the data collection efforts, and shall include the horizontal and vertical extent of contamination in the soils at the Site that exceed background levels of chemical contaminants.

2.6.2. NASA shall prepare and submit a Radiological Data Summary Report that reviews use and management of radioactive materials, including a review of historical documents, for Area II and the portion of Area I administered

by NASA. The review shall also include prior radiological sampling conducted in the NASA areas.

2.7. Feasibility Study. For purposes of this Order, NASA shall not be required to prepare or submit a Feasibility Study.

2.8. Soils Remedial Action Implementation Plan. After DTSC approval of the Chemical and Radiological Data Summary Reports, NASA shall prepare and submit a draft Soils Remedial Action Implementation Plan to DTSC for review and approval. The draft Soils Remedial Action Implementation Plan shall be based on and summarize the approved Chemical and Radiological Data Summary Report, and shall clearly describe the following:

1) A general description and history of the Site.
2) The nature and extent of radiological and chemical contamination at the Site.
3) The planned remedial action and its objectives.
4) Any areas proposed for the exercise of any of the exemptions specified in the AIP from the background cleanup standards, and the rationale for their exemption.
5) Any areas proposed for treatment in place to achieve the cleanup goals, including the results of treatability studies conducted pursuant to Section 2.5. The draft Soils Remedial Action Implementation Plan shall propose in situ or on site treatment options to the maximum extent possible in areas where in situ or on site treatment can be demonstrated to effectively achieve the cleanup goals.

6) All proposed mitigation measures necessary to address any identified environmental impacts.
7) A schedule for implementation of the planned remedial actions. The schedule shall ensure that the identified activities can be accomplished by 2017 or sooner.

2. 9. Soils Remedial Design. The Soils Remedial Action Implementation Plan shall also include Soils Remedial Design elements that detail the technical and operational plans for implementation of the Soils Remedial Action Implementation Plan. The Soils Remedial Design elements shall include the following, as applicable:

1) Description of equipment used to excavate, handle, and transport contaminated material.
2) A dust control and suppression plan that ensures the minimization of airborne dust generation during remedial activities, and an air monitoring plan that monitors the effectiveness of dust control and suppression efforts.
3) A transportation plan identifying routes of travel and final destination of wastes generated and disposed, and a description of mitigation measures to be taken to address any identified environmental impacts due to transportation.
4) An updated health and safety plan addressing the implementation activities.
5) Identification of all necessary permits and agreements, and demonstration

of the acquisition of those permits and agreements.

6) A detailed schedule for implementation of the remedial action, including procurement, mobilization, construction phasing, sampling, facility startup, and testing.

2.10. Disposal of Contaminated Soils. The Soils Remedial Action Implementation Plan shall also include plans for the management and disposal of contaminated soils. The Soils Remedial Action Implementation Plan shall provide that soils contaminated with chemical contaminants will be managed and disposed in accordance with the AIP. In addition, to the extent any radiological materials are determined to be present at this portion of the Site, the Soils Remedial Action Implementation Plan shall provide that soils contaminated with radiological materials are disposed as follows:

2.10.1 Soils contaminated with radioactive contaminants above local background to licensed low-level radioactive waste (LLRW) disposal site or an authorized LLRW disposal facility at a DOE site.

2.10.2 Mixed wastes (with radioactive and hazardous constituents) to go to a site licensed for mixed wastes or an authorized mixed waste disposal facility at a DOE site.

2.10.3 In addition to meeting the above disposal requirements, all soils must also meet the waste acceptance criteria for the receiving facility.

2.11 Confirmation Sampling. In accordance with the AIP (Attachment B), sampling to confirm that the required cleanup standard has been met shall be conducted in accordance with a protocol that is consistent with the protocol

developed between DTSC and DOE entitled “Confirmation Protocol; ‘Not to Exceed’; Background Cleanup Standard for Soils.” DTSC and NASA shall jointly develop the confirmation protocol prior to the implementation of the Final Soils Remedial Action Implementation Plan.

2.12. Modification to Soils Remedial Action Implementation Plan. As a result of its review, and as necessary in response to comments received pursuant to the public review and comment period described in Section 3.0, DTSC may require changes to be made to the draft Soils Remedial Action Implementation Plan. NASA shall modify the draft Soils Remedial Action Implementation Plan in accordance with DTSC's specifications and submit a final Soils Remedial Action Implementation Plan within 60 days of receipt of DTSC's specified changes.

2.13. Changes During Implementation. During the implementation of the final Soils Remedial Action Implementation Plan, DTSC may specify such additions, modifications, and revisions to the Soils Remedial Action Implementation Plan as DTSC deems necessary in order to carry out this Order.

2.14. Stop Work Order. In the event that DTSC determines that any activity (whether or not pursued in compliance with this Order) may pose an imminent or substantial endangerment to the health or safety of people on the Site or in the surrounding area or to the environment, DTSC may order NASA to stop further implementation of this Order for such period of time needed to abate the endangerment. In the event that DTSC determines that any Site activities (whether or not pursued in compliance with this Order) are proceeding without

DTSC authorization, DTSC may order NASA to stop further implementation of this Order or activity for such period of time needed to obtain DTSC authorization, if such authorization is appropriate. Any deadline in this Order directly affected by a Stop Work Order, under this Section, shall be extended for the term of the Stop Work Order.

2.15. Emergency Response Action/Notification. In the event of any action or occurrence (such as a fire, earthquake, explosion, or human exposure to hazardous substances, as defined in Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9601(14), caused by the release or threatened release of a hazardous substance) during the course of this Order, NASA shall immediately take all appropriate action to prevent, abate, or minimize such emergency, release, or immediate threat of release and shall immediately notify the Project Director. NASA shall take such action in consultation with the DTSC Project Director and in accordance with all applicable provisions of this Order. Within seven days of the onset of such an event, NASA shall furnish a report to DTSC, signed by NASA's Project Director, setting forth the events which occurred and the measures taken in the response thereto. In the event that NASA fails to take appropriate response and DTSC takes the action instead, NASA shall be liable to DTSC for all costs of the response action. Nothing in this Section shall be deemed to limit any other notification requirement to which NASA may be subject.

3.0. PUBLIC PARTICIPATION

3.1 In conjunction with NASA, DTSC shall implement the public review process specified in DTSC's Public Participation Policy and Guidance Manual and as detailed in the final SSFL Public Participation Plan dated March 2009. In accordance with the Site Public Participation Plan, opportunities shall be provided for the public to review and comment on all draft plans and reports prepared by NASA. DTSC shall consider any comment received from the public as it evaluates draft plans and reports prepared by NASA. In response to comments received, DTSC shall prepare a response to the public comments, explaining the disposition of DTSC's actions regarding the comments received. If requested by DTSC, NASA shall submit within two weeks, if practicable, of any request the information necessary for DTSC to prepare its responses to the public comments.

4.0. ENVIRONMENTAL REVIEW PROCESSES

4.1. California Environmental Quality Act (CEQA). NASA shall cooperate in providing all available information necessary to facilitate DTSC's preparation of an analysis under the California Environmental Quality Act (CEQA), Calif. Public Resources Code Sections 21000 *et seq.* The costs incurred by DTSC in complying with CEQA are response costs, and NASA shall reimburse DTSC for such costs pursuant to Section 5.12, below.

4.1.1. DTSC's analysis shall include, but not be limited to, the following:

4.1.2. Scoping at the conclusion of all data gathering efforts to identify the types of environmental impacts that might be anticipated.

4.1.3. Identification and quantification of environmental impacts that are anticipated to occur as a result of implementing the activities specified in this Order.

4.1.4. Identification of alternative mitigation measures that could be used to mitigate the identified environmental impacts that are anticipated to occur as a result of implementing the activities specified in this Order, and an assessment as to the relative effectiveness of each mitigation measure.

4.2. National Environmental Policy Act (NEPA).

4.2.1. NASA shall make its specific decisions on how to conduct the clean-up to background defined in this Agreement in accordance with the requirements of the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 et seq.).

4.2.2. DTSC shall cooperate with and provide necessary information for NASA to conduct NEPA.

4.2.3. NASA shall conduct all activities under this Order in a way that will promptly comply with the requirements of NEPA. DTSC shall not approve these activities prior to complying with the requirements of CEQA.

4.3. DTSC and NASA shall work to coordinate the CEQA and NEPA processes.

5.0. OTHER REQUIREMENTS AND PROVISIONS

5.1. Project Director. Within 14 days of the effective date of this Order, DTSC and NASA shall designate their respective Project Directors and shall

notify each other in writing of the Project Director they have selected. NASA's Project Director shall be responsible for overseeing the implementation of this Order and for designating a person to act in his/her absence. All communications between NASA and DTSC, and all documents, report approvals, and other correspondence concerning the activities performed pursuant to this Order shall be directed through their respective Project Directors. Each party may change its Project Director with at least seven days prior written notice to the other party.

5.2. Web Site. NASA shall continue to proportionally contribute to the website that has been established for purposes of posting documents and information related to the investigation and cleanup of the SSFL. The content of the website shall remain solely under the control of DTSC. No changes to the website are to be made without prior DTSC approval.

5.3. DTSC Approval.

5.3.1. Subject to the dispute resolution procedures in Section 5.19.1 through 5.19.9, NASA shall revise any workplan, report, specification, or schedule in accordance with DTSC's written comments. NASA shall submit to DTSC any revised documents by the due date specified by DTSC. Revised submittals are subject to DTSC's written approval or disapproval. If DTSC disapproves of any submittal in whole or in part, it shall explain in writing the reason(s) for its disapproval.

5.3.2. Upon receipt of DTSC's written approval, NASA shall commence work and implement any approved workplan in accordance with the schedule and provisions contained therein.

5.3.3. Any DTSC approved workplan, report, specification, or schedule required by this Order shall be deemed incorporated into this Order.

5.3.4. Any requests for revision of an approved workplan requirement must be in writing. Such requests must be timely and provide justification for any proposed workplan revision. DTSC shall approve such proposed revisions absent good cause not to do so. Any approved workplan modification shall be in writing and shall be incorporated by reference into this Order.

5.3.5. Verbal advice, suggestions, or comments given by DTSC representatives shall not constitute an official approval or disapproval.

5.3.6. DTSC shall use its best efforts to review, comment, and render a decision on any workplan, report, specification, or schedule submitted by NASA in a timely fashion, with the goal of rendering a decision within 120 days of NASA's submittal. Failure by DTSC to render a decision within 120 days of NASA's submittal shall not constitute *de facto* approval. Any deadline in this Order directly affected by DTSC's failure to render a decision in the time frames specified under this Section shall be extended for a period of time not to exceed the actual time taken beyond the specified time frame for DTSC to render the decision.

5.4. Submittals.

5.4.1. NASA shall provide DTSC with quarterly progress reports of response action activities conducted pursuant to this Order.

5.4.2. Any report or other document submitted by NASA pertaining to its activities at the Site pursuant to this Order shall be signed and certified by a duly authorized representative.

5.4.3. The certification required above, shall be in the following form:

> I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

5.4.4. All reports and other documents submitted by NASA or its consultants in response to this Order shall be submitted to DTSC in both hard copy and electronically.

5.4.5. Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices, or other submissions relating to this Order shall be in writing and shall be sent to the current Project Directors.

5.5. Proposed Contractor/Consultant.

All work performed by NASA pursuant to this Order shall be under the direction and supervision of a professional engineer or registered geologist, registered in California, with expertise in hazardous substance site cleanup. NASA's contractors and consultants shall have the technical expertise sufficient

to fulfill their responsibilities. Within 14 days of the effective date of this Order or any contract awarded to implement this Order, NASA shall notify the DTSC Project Director in writing of the name, title, and qualifications of the professional engineer or registered geologist and of any contractors or consultants and their personnel to be used in carrying out the requirements of this Order. Notifications submitted prior to the effective date of this Order in response to Section 4.5. of the August 16, 2007 Consent Order for Corrective Action need to be resubmitted only if the information contained in the notification has changed.

5.6. Chemical and Radiological Analyses.

5.6.1. Except as provided below, NASA shall use California State-certified analytical laboratories for all chemical and radiological analyses required to comply with this Order. If a California State-certified laboratory is not available for a particular test required by this Order, NASA shall use an alternative laboratory identified by NASA subject to approval by DTSC. The names, addresses, telephone numbers, and California Department of Public Health, Environmental Laboratory Accreditation Program (ELAP) certification numbers of the laboratories NASA proposes to use must be specified in the applicable workplans.

5.6.2. NASA shall monitor to ensure that high quality data are obtained by their consultants and contract laboratories. NASA shall ensure that laboratories it uses for chemical analyses perform such analyses according to the latest approved edition of "Test Methods for Evaluating Solid Waste, (SW 846)," or other methods deemed satisfactory to DTSC. If methods other than U.S. EPA

methods are to be used, NASA shall specify all such protocols in the affected workplan. DTSC shall reject any chemical data that do not meet the requirements of the approved workplan, U.S. EPA analytical methods, or quality assurance/quality control procedures, and may require resampling and analysis. NASA shall ensure that laboratories it uses for radiological analyses perform such analyses according to the latest approved edition of "HASL-300, EML Procedures Manual" or other methods deemed satisfactory to DTSC. If methods other than HASL-300 methods are to be used, NASA shall specify all such protocols in the affected workplan (e.g., RI workplan). DTSC shall reject any radiological data that do not meet the requirements of the approved workplan, HASL-300 methods, or quality assurance/quality control procedures, and may require resampling and analysis.

5.6.3. NASA shall ensure that the laboratories used for analyses have quality assurance/quality control programs. DTSC may conduct a performance and quality assurance/quality control audit of the laboratories chosen by NASA before, during, or after sample analyses. Upon request by DTSC, NASA shall have their selected laboratory perform analyses of samples provided by DTSC to demonstrate laboratory performance. If the audit reveals deficiencies in a laboratory's performance or quality assurance/quality control procedures, resampling and analysis may be required.

5.7. Sampling and Data/Document Availability.

5.7.1. Upon request, NASA shall provide DTSC with the results of all sampling or tests or other data generated by its employees, agents, consultants,

or contractors pursuant to this Order. NASA shall follow the same signature and certification requirements of Section 5.4.3, 5.4.4, and 5.4.5, *above* for information submitted pursuant to this Section.

5.7.2. Notwithstanding any other provisions of this Order, DTSC retains all of its information gathering and inspection authority and rights, including enforcement actions related thereto, under the Health and Safety Code, and any other State or federal law.

5.7.3. NASA shall notify DTSC in writing at least seven days prior to beginning each separate phase of field work approved under any workplan required by this Order. NASA believes it must commence emergency field activities without delay, NASA shall seek emergency telephone authorization from the DTSC Project Director or, if the Project Director is unavailable, their designee, to commence such activities immediately.

5.7.4. At the request of DTSC, NASA shall provide or allow DTSC or its authorized representative to take split or duplicate samples of all samples collected by NASA pursuant to this Order. At the request of NASA, DTSC shall allow NASA or their authorized representative(s) to take split or duplicate samples of all samples collected by DTSC under this Order.

5.8. Access.

5.8.1. Subject to Boeing's and NASA's security and safety procedures at the Site, NASA shall provide DTSC and its representatives access at all reasonable times, following normal NASA procedures, if any, for access onto the Site, to the areas of the Site under NASA's control, and any other property to

which access is required for implementation of this Order, and shall permit such persons to inspect and copy all non-privileged records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Order and that are within the possession or under the control of NASA, or its contractors or consultants.

5.8.2. To the extent that work being performed pursuant to this Order must be conducted on areas of the Site not under NASA's ownership, possession or control, or on property beyond the Site boundary, NASA shall use its best efforts to obtain access agreements necessary to complete work required by this Order from the present owners or possessors, as appropriate, of such property, within 30 days of approval of any workplan for which access is required. "Best efforts" as used in this paragraph shall include, at a minimum, a letter by certified mail from NASA to the present owners or possessors of such property, requesting an agreement to permit NASA and DTSC and their authorized representatives access to such property. Any such access agreement shall provide for access to DTSC and its representatives. NASA shall provide DTSC's Project Director with a copy of any access agreements in their possession. In the event that an agreement for access is not obtained within 30 days of approval of any workplan for which access is required, an unanticipated need for access becomes known to NASA, or access is revoked by the property owner or possessor, NASA shall notify DTSC in writing within 14 days thereafter regarding both the efforts undertaken to obtain access and the failure to obtain such agreements. In such event, DTSC may elect to use its authority under Chapter

6.8 of Division 20 of the California Health and Safety Code to obtain access for NASA, including, without limitation, its authority to assess daily civil penalties against the refusing property owner under Health and Safety Code Section 25367. In the event that DTSC is unable to obtain access from the present owners or possessors of such property or take whatever measures are necessary so that the work may proceed, NASA's obligation to perform that particular element of work and its obligation to provide access to DTSC shall be stayed until the appropriate relief is obtained.

5.8.3. Nothing in this Section limits or otherwise affects DTSC's right of access and entry pursuant to any applicable State or federal law or regulation.

5.8.4. Nothing in this Section shall be construed to limit NASA's liability and obligation to perform response actions that are being conducted pursuant to this Order, either within the Site boundary or beyond the Site boundary, as provided in the AIP, including such action on areas of the Site not owned, possessed or controlled by NASA, or on property beyond the Site boundary except as clarified in Section 5.8.2, with respect to the timing of NASA's liabilities and obligations. The AIP describes NASA's commitment to remediate the areal extent of any contiguous radiologic or chemical contamination of soil that emanates from within the Site.

5.9. Record Preservation.

5.9.1. In addition to requirements applicable to NASA under 36 CFR Chapter 12, Subchapter B, in accordance with NARA-approved NASA Records Disposition Schedules, NASA shall retain, during the implementation of this

Order and for a minimum of ten (10) years after the Acknowledgment of Satisfaction executed pursuant to Section 7.0 of this Order, all data, records, and documents that relate to implementation of this Order or to radioactive waste or hazardous waste management and/or disposal. NASA shall notify DTSC in writing 90 days prior to the destruction of any such records, and shall provide DTSC with the opportunity to take possession of any such records. Such written notification shall reference the effective date, caption, and docket number of this Order and shall be sent to the DTSC Project Director.

5.10. Notice to Contractors and Successors. NASA shall provide a copy of this Order to all contractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order and shall condition all such contracts on compliance with the terms of this Order. NASA shall give written notice of this Order to any successor in interest prior to transfer of ownership or operation of any portion of the Site that NASA owns or operates and shall notify DTSC at least 30 days prior to such transfer. NASA or its contractors shall provide written notice of this Order to all subcontractors hired to perform any portion of the work required by the Order. NASA shall nonetheless be responsible, to the extent reasonably within their control, for ensuring that their contractors and subcontractors perform the work contemplated herein in accordance with this Order. With regard to the activities undertaken pursuant to this Order, in addition to any defenses which may be available under this Order, the defenses available to NASA shall be those specified in Health and Safety

Code section 25323.5 (incorporating by reference Sections 101(35) and 107(b) of CERCLA, 42 U.S.C., section 9601(35) and 9607(b),

5.11. Compliance with Applicable Laws and Regulations. All actions taken pursuant to this Order by NASA shall be undertaken in accordance with applicable local, State, and federal laws and regulations. As specified in Section 1.6, compliance with this Order and the 2007 Order shall constitute NASA's full and complete compliance with all applicable provisions of Chapters 6.5 and 6.8 of the Division 20 of the California Health and Safety Code (the California Hazardous Waste Control Law, Sections 25100 *et seq.* of that Code, and the California Hazardous Substance Account Act, Sections 25300 *et seq.* of that Code) with respect to the application of the provisions of this Order to radiologic or chemical contamination of soil at the Site or any contiguous radiologic or chemical contamination of soil emanating from within Area II or the portion of Area I owned by NASA, within or outside of the SSFL boundaries, that has been identified by U.S.EPA in its radiologic characterization survey or by DTSC as part of the investigation of chemical contaminants that NASA has remediated. NASA shall obtain or cause their representatives to obtain all permits and approvals necessary under such applicable laws and regulations.

5.12. Costs.

5.12.1. NASA is liable for all costs associated with the implementation of this Order, including all costs incurred by DTSC in overseeing the work required by this Order, to the extent authorized under California Health and Safety Code Sections 25269 through 25269.6, including procedures for dispute resolution

under Section 5.19.1 through 5.19.9, below. DTSC shall retain all cost records associated with the work performed under this Order as required by State law. DTSC shall make all documents that support DTSC's cost determination available for inspection upon request, as provided in the California Public Records Act. With respect to the payment of costs, NASA may use any alternative mechanism authorized by federal law.

5.12.2. NASA retains any rights it may have to recover the costs of complying with this Order from any person not a Party to this Order and nothing in this Consent Order is intended to compromise or hinder any such rights.

5.13. Liability. Except as expressly set forth in Section 1.6 above, nothing in this Order shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current, or future operations of NASA. Notwithstanding compliance with the terms of this Order, but subject to the express provisions in Section 1.6 above, NASA may be required to take further actions as are necessary to protect public health or welfare or the environment (a) in the event previously unanticipated conditions are discovered that present an imminent and substantial endangerment notwithstanding the work to be performed under this Order, or (b) in the event any negligent or intentional act or omission by NASA during the performance of its obligations under this Order results in the need for additional response actions in order to achieve this Order's objective to clean up chemical and radiological contamination at the Site to local background levels.

5.14. Government Liabilities. The State of California shall not be liable for injuries or damages to persons or property resulting from acts or omissions by NASA in carrying out activities pursuant to this Order, nor shall the State of California be held as a party to any contract entered into by NASA or its agents in carrying out activities pursuant to the Order.

5.15. Availability of Federal Funds.

5.15.1. NASA's obligations under this Order are subject to the availability of funds appropriated and legally available for such purpose. No provision of this Order shall be interpreted as or constitute a commitment or requirement that NASA obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other applicable provision of law. NASA shall use its best efforts, by means of the federal budgetary process, to obtain the funds necessary to perform its obligations under the 2007 Order and this Order. Nothing in this Order shall be construed to require disclosures related to confidential internal federal budget deliberations not otherwise authorized under federal law.

5.15.2. It is agreed that if inadequate funds are appropriated for such purposes, NASA shall notify DTSC promptly and develop a plan in writing to endeavor to secure additional funding to carry out the requirements of this Order. Nothing herein shall be construed as precluding NASA from arguing that the unavailability of appropriated funds constitutes a *force majeure* event. DTSC and NASA agree that in any dispute or any proceeding to enforce the requirements of this Order, NASA may raise as a defense that any failure or delay was caused by the unavailability of appropriated funds.

5.16. [Reserved]

5.17. Incorporation of Plans and Reports. All plans, schedules, and reports that require DTSC approval and are submitted by NASA pursuant to this Order and are not the subject of dispute resolution under Section 5.19.1 through 5.19.9 are incorporated in this Order upon approval by DTSC.

5.18. Penalties for Noncompliance.

5.18.1. NASA shall be liable for stipulated penalties in the amount of $15,000 per day for a material failure to comply with the requirements of this Order, including the making of any false statement or representation in any document submitted for purposes of compliance with this Order. "Compliance" by NASA shall include, but shall not be limited to, completion of the activities under this Order or any workplan or other plan approved under this Order within the specified time schedules established by and approved pursuant to this Order or as otherwise directed by DTSC under this Order.

5.18.2. Following DTSC's determination that NASA has materially failed to comply with a requirement of the Order, DTSC shall give NASA written notification of the violation and describe the noncompliance. DTSC shall send NASA a written notice of noncompliance with an opportunity to cure by a date designated by DTSC in lieu of or prior to a written demand for the payment of the penalties. NASA may dispute DTSC's finding of noncompliance by invoking the dispute resolution procedures described in Section 5.19.1 through 5.19.9 herein. All penalties assessed under Section 5.18.1 shall begin to accrue on the business day after the complete performance is due or the day a violation occurs,

and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. The accrual and payment of any proposed penalty shall be tolled during the dispute resolution period. If NASA does not prevail in dispute resolution, any penalty shall be due to DTSC within 30 days of resolution of the dispute unless appealed to a court of law. If NASA prevails in dispute resolution, no penalty shall be paid.

5.18.3. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Order and other applicable provisions of law, except that the same facts shall not be relied upon to generate separate and cumulative penalties against NASA. Notwithstanding the provisions of Section 5.18.1, 5.18.2, or 5.18.3, DTSC reserves the right to seek additional remedies or sanctions for knowing violations of this Order, including knowingly making any false statement or representation in any document submitted for purposes of compliance with this Order

5.19. Dispute Resolution.

5.19.1. The parties agree that the procedures contained in this section are the exclusive procedures for resolving all disputes that may arise under this Order. By its execution of this Order, and for no other purpose unrelated to this matter, NASA expressly agrees that DTSC has the authority to enforce the terms of this Order. At no time during any informal, formal, or judicial resolution of any dispute arising under this Order shall NASA contend that DTSC does not possess such legal authority. Nor shall NASA initiate a separate challenge to such legal authority in state or federal court.

5.19.2. If any dispute arises over the interpretation of, or compliance with, any provision of this Order, NASA's Project Director and DTSC's Project Director shall attempt to resolve the dispute informally.

5.19.3. If DTSC's Project Director determines after due consideration that the dispute cannot be resolved informally, the Project Director shall notify NASA of such determination. NASA may then pursue the matter by making an objection in writing to DTSC's Director, or his or her designee, with a copy to DTSC's Project Director. NASA's written objection shall set forth the specific points of the dispute and the basis for NASA's position. NASA's objection to DTSC's Director shall be served by mail no later than fourteen (14) calendar days after NASA is notified of the determination by DTSC's Project Director that the dispute cannot be resolved informally. The date by which NASA may submit any written objection may be extended by DTSC for good cause, but shall not exceed an additional 45 days.

5.19.4. Within 30 calendar days after DTSC's receipt of NASA's written objection, DTSC's Director, or his or her designee, shall meet with a NASA representative who is of equivalent decisionmaking authority as DTSC's Director, for the purpose of resolving the dispute through formal discussions. This formal dispute resolution on NASA's objection(s) shall include the NASA representative who is of equivalent decisionmaking authority as DTSC's Director, DTSC's Director, or his or her designee, and the Secretary of the California Environmental Protection Agency (CalEPA), or another state official designated pursuant to State law to carry out the functions of the Secretary of CalEPA, and

shall take place during the 30-day period after receipt of NASA's objection(s), or such longer period if determined necessary by DTSC. Within fourteen (14) calendar days after the conclusion of the formal discussion period, the Secretary of CalEPA, or another state official designated pursuant to State law to carry out the functions of the Secretary of CalEPA, shall provide NASA with CalEPA's written decision on the dispute. CalEPA's written decision shall reflect any agreements reached during the formal discussion period, shall represent the decision of both DTSC's Director and the CalEPA Secretary, and shall be signed by the Secretary of CalEPA, or another state official designated pursuant to State law to carry out the functions of the Secretary of CalEPA.

5.19.5. During the pendency of all dispute resolution procedures set forth in Section 5.19.1 through 5.19.4 of this Order, the time periods for completion of work to be performed under this Order that are affected by such a dispute shall be extended for a period of time not to exceed the actual time taken to resolve the dispute. The existence of such a dispute shall not excuse, toll, or suspend any other compliance obligation or deadline required pursuant to this Order except to the extent that such other compliance obligation or deadline is dependent upon the resolution of the matter that is the subject of dispute under this Order, in which case the time periods for completion of such other compliance obligation or deadline required pursuant to this Order that are affected by such a dispute shall be extended for a period of time not to exceed the actual time taken to resolve the dispute.

5.19.6. In the event that NASA desires to affirmatively challenge a decision made or an action taken against NASA by DTSC under this Order, NASA may commence a civil action in United States District Court, pursuant to 28 U.S.C. § 1345, for a determination of the parties' rights and obligations with respect to the dispute in question. In such event, DTSC agrees not to request a transfer of such matter to State court on abstention or other grounds. Notwithstanding NASA's right to seek judicial relief pursuant to this Section, DTSC may alternatively elect to utilize its rights under Section 5.19.7 to initiate a legal action to obtain a declaration that NASA is required to perform the obligation that was the subject of the dispute resolution procedures in Section 5.19.1 through 5.19.4 above.

5.19.7. In the event that DTSC desires to enforce a decision it has made under this Order, an action it has taken against NASA under this Order, or NASA's failure or refusal to perform any obligation or requirement of this Order, DTSC initially shall file a civil action in state court, after which filing NASA agrees to timely remove the action to the applicable United States District Court pursuant to 28 U.S.C. § 1442(a)(1), and DTSC agrees not to petition for a remand or other transfer of such matter to state court.

5.19.8. Solely for purposes of resolving any dispute between DTSC and NASA relating to the requirements of this Order, and for no other purposes, NASA shall not contest DTSC's allegation that the Site is a facility that is currently operated by an agency of the United States (*i.e.* NASA) as set forth in Section 120(a)(4) of CERCLA, 42 U.S.C. § 9620(a)(4). NASA also agrees, solely

for purposes of any potential enforcement of this Order, and for no other purposes, that NASA shall not contest DTSC's allegation that the standards and requirements in this Order are no more stringent than the standards and requirements that would be applicable to a similar facility operated by a private party.

5.19.9. Resolution of any dispute arising out of this Order, whether being sought informally, formally, or judicially, shall be based solely upon the obligations and responsibilities of the Parties as expressly set forth in this Order. DTSC shall not assert that NASA is subject to or required to comply with Section 25359.20 of the California Health and Safety Code. NASA shall not assert any defenses based on either party's alleged lack of legal authority to agree to perform, or enforce, the terms herein, including, without limitation, a defense based on an alleged preemption by federal law of DTSC's authority to oversee and enforce the terms of this Order.

5.20. Force Majeure. NASA shall cause all work to be performed within the time limits set forth in this Order, unless an extension is approved by DTSC for good cause or performance delayed by events that constitute an event of *force majeure*. NASA shall make good faith efforts to avoid circumstances that could result in *force majeure* that could impact the completion of work pursuant to the time limits set forth in this Order. For purposes of this Order, an event of *force majeure* is an event arising from circumstances beyond the control of NASA that delays performance of any obligation under this Order, provided NASA has undertaken all appropriate planning and preventive measures to avoid

any foreseeable circumstances. Increases in cost of performing the work required by this Order shall not be considered circumstances beyond the control of NASA. For purposes of this Order, events which constitute a *force majeure* shall include, without limitation, events such as acts of God, war, civil commotion, unusually severe weather, labor difficulties, shortages of labor, materials, or equipment, government moratorium or shutdown, delays in obtaining necessary permits due to action or inaction by third parties, restraint by court order, unavailability of appropriated funds, earthquake, fire, flood, or other casualty. NASA shall notify DTSC in writing promptly after NASA learns of the occurrence of the *force majeure* event. Such notification shall describe the anticipated length of the delay, the cause or causes of the delay, the measures taken or to be taken by NASA to minimize the delay, and the timetable by which these measures shall be implemented. If DTSC agrees that NASA's delay, non-performance or non-compliance is attributable to a *force majeure* event, the time for performance of or compliance with the applicable obligation or requirement of this Order shall be extended as the parties agree is reasonably necessary to complete the obligation or requirement. If DTSC does not agree that the delay is attributable to a *force majeure* event, or the Parties do not concur on the amount of time to complete or fulfill the obligation or requirement affected by the *force majeure* event, the matter shall be subject to the dispute resolution procedures set forth above.

5.21. Schedule Changes. If NASA is unable to perform any activity or submit any document by the date specified in any schedule developed pursuant to this Order, including the date referenced in the AIP, due to delays by DTSC in

completing its review of or response to submittals by NASA, upon DTSC's completion of such review of or response to such submittals, the schedule shall be automatically adjusted accordingly, unless DTSC and NASA agree to an alternative schedule, and the new schedule shall be incorporated by reference into this Order. In such event, the provisions of Section 5.18 (Penalties for Noncompliance) shall not apply to NASA's inability to perform any activity or submit any document under the original schedule; however, Section 5.18 (Penalties for Noncompliance) shall apply to the new schedule unless the schedule is revised pursuant to this Section 5.21 or Section 5.22.

5.22. Extension Requests. If NASA is unable to perform any activity or submit any document within the time required under any schedule developed pursuant to or in this Order, including any schedule or deadline referenced in the AIP, NASA shall, prior to expiration of the time, request an extension of the time in writing. The extension request shall include a justification for the delay and the proposed new schedule. All such requests shall be in advance of the date on which the activity or document is due. If DTSC determines that good cause exists for an extension, it shall grant the request and specify a new schedule in writing. "Good cause" shall include, but shall not be limited to, delays in receiving any approvals, authorizations or permits that NASA is required to obtain from any federal, State or local agency so as to allow the work under this Order to be performed, as well as delays by DTSC in completing its review of and response to submittals by NASA to the extent that future deadlines specified in the schedule are impacted. NASA shall submit a revised

schedule to DTSC for review and approval, which shall be incorporated by reference into this Order.

5.23. Parties Bound. This Order shall apply to and be binding upon NASA, and agents, employees, contractors, consultants, successors and assignees.

5.24. Other State Agencies. No provision of this Order is intended to, nor shall be construed to, interfere with or supersede the authority of any other State or any local agency.

5.25. Time Periods. Unless otherwise specified, time periods begin from the effective date of this Order and "days" means calendar days. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday or federal or State holiday, the period shall run until the next business day.

5.26. Severability. The requirements of this Order are severable. Should a provision or provisions of this Order be determined by a court to be ineffective, or should a court determine that any federal or State law or regulation incorporated into, referenced in, or authorizing this Order is invalid or unenforceable in whole or in part, NASA shall comply with each and every remaining effective provision.

MODIFICATION

6.0. This Order may be modified by the mutual agreement of the parties. Any agreed modifications shall be in writing, shall be signed by both Parties, shall

have as their effective date the date on which they are signed by DTSC, and shall be deemed incorporated into this Order.

TERMINATION AND SATISFACTION

7.0. The provisions of this Order shall be deemed satisfied upon the execution by the parties of an Acknowledgment of Satisfaction (Acknowledgment). DTSC shall prepare the Acknowledgment for NASA's signatories. The Acknowledgment shall specify that NASA has demonstrated to the satisfaction of DTSC that the terms of this Order including payment of DTSC's costs have been satisfactorily completed. The Acknowledgment shall affirm NASA's continuing obligation to preserve all records after the rest of the Order is satisfactorily completed.

EFFECTIVE DATE

8.0. The effective date of this Order shall be the date on which the Order is signed by DTSC.

NO THIRD PARTY BENEFICIARY

9.0. The Parties to this Order agree that there are no third party beneficiaries to any of the terms and conditions contained in, or rights and obligations arising out of, this Order.

DATE: 12/6/10

Maziar Movassaghi, Acting Director
Department of Toxic Substances Control

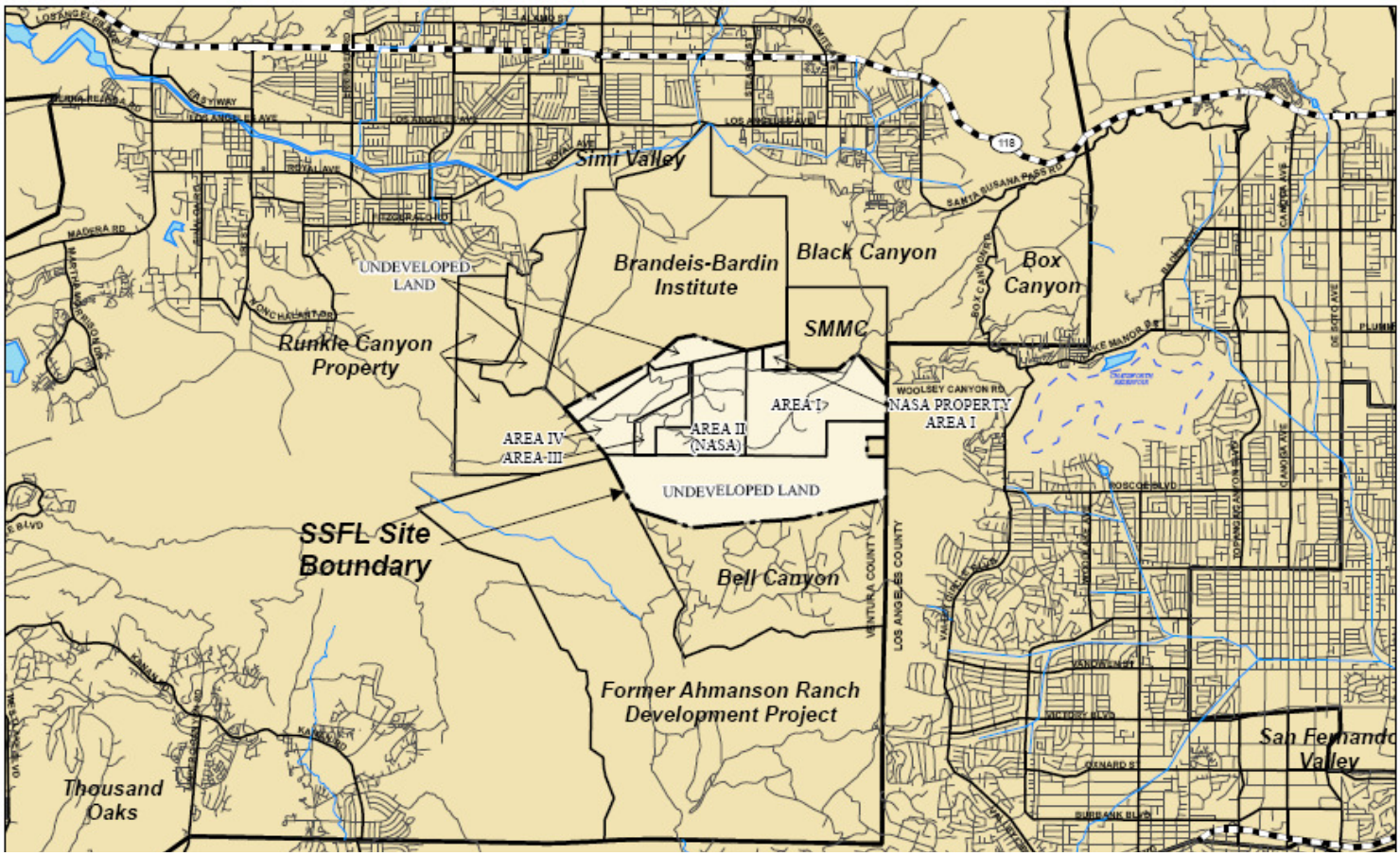
DATE: 12/06/2010

Ms. Olga M. Dominguez, Assistant Administrator,
Office of Strategic Infrastructure National Aeronautics
and Space Administration

ATTACHMENT A

Santa Susana Field Laboratory

Regional Map



ATTACHMENT B

Final Agreement in Principle

JOINT SETTLEMENT FRAMEWORK

Agreement in Principle
between
The National Aeronautics and Space Administration and the State of California

Regarding Cleanup of Areas I and II of the Santa Susana Field Laboratory Administered by NASA

SUMMARY: The end state after cleanup of Areas I and II of the site administered by NASA will be background (i.e., at the completion of the cleanup, no contaminants will remain in the soil above local background levels), subject to any special considerations specified below.

- Clean up chemical contaminants to local background concentrations
  Possible exceptions (where unavoidable by other means):
  - The framework acknowledges that, where appropriate, NASA will engage in an Endangered Species Act (ESA) Section 7 consultation with the U.S. Fish and Wildlife Service (FWS) over any species or critical habitat that may be affected by a federal action proposed to be undertaken herein on a portion of the site. Impacts to species or habitat protected under the Endangered Species Act may be considered as possible exceptions from the cleanup standard specified herein only to extent that the federal Fish and Wildlife Service, in response to a request by NASA for consultation, issues a Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site.

  - The acceptance and exercise of any of the following exceptions is subject to DTSC's oversight and approval, and the resulting cleanup is to be as close to local background as practicable:
    - Detection limits for specific contaminants exceed the local background concentration, in which case the cleanup goal shall be the detection limits for those specific contaminants.
    - Native American artifacts that are formally recognized as Cultural Resources
    - Other unforeseen circumstances but only to the extent that the cleanup cannot be achieved through technologically feasible measures. Under no circumstances shall exceptions for unforeseen circumstances be proposed in excess of five percent of the total soil cleanup volume.

- DTSC, in the course of overseeing and approving its chemical contaminant background study, will determine local background levels and chemical detection limits (using methods that are consistent with EPA guidance on determining local background concentration values). Upon completion of the DTSC led chemical background study, a "look-up" table of the chemical cleanup levels will be prepared, which will include both local background concentrations as well as minimum detection limits for specific contaminants whose minimum detection limits exceed local background concentrations.

- Residual concentrations "not to exceed" local background concentrations i.e., if during site survey efforts or during confirmatory sampling the level of any constituent detected in a soil sample is above local background levels, step-outs will be taken to delineate the contamination and removed; soil above local background will not be averaged with other soil. This process should not be inconsistent with any guidance that EPA may issue pertaining to the practice of implementing a not to exceed background cleanup approach.

- Cleanup to background means removal of soils contaminated above local background levels
    - No "leave in place" alternatives will be considered
    - No on-site burial or land filling of contaminated soil will be considered

- Backfill/replacement soils must not exceed local background levels
    - Onsite soils that do not exceed local background may be used as backfill/replacement soils
    - Offsite soils that have been verified to not exceed local background levels may be used as backfill/replacement soils
        - Backfill/replacement soils that are acceptable for use shall be verified by DTSC

- Disposal of contaminated soils:
    - Soils contaminated with chemical contaminants above local background:
        - Hazardous wastes to licensed Class 1 hazardous waste disposal facilities only
        - Non-hazardous waste to licensed Class 2 or subtitle D compliant Class 3 disposal facilities only
    - In addition to meeting the above disposal requirements, all soils must also meet the waste acceptance criteria for the receiving facility.

- To the extent any radiological materials are determined to be present at this portion of the site, DTSC and NASA will develop an appropriate sampling and disposal plan for those materials.

- Chemical investigation/data gaps
    - DTSC, in the course of overseeing and approving the chemical contaminant investigation work, will determine where onsite levels exceed local background.

- Development of risk assessments will not be required.

- As identified by DTSC as part of the investigation of chemical contaminants, NASA will remediate the areal extent of any contiguous chemical contamination of soil that emanates from within Areas I and II administered by NASA, even to the extent that it migrates beyond the boundaries of Areas I and II administered by NASA within or without the SSFL boundaries.

- Following completion of the characterization studies by DTSC, NASA will develop a remedial action implementation work plan that describes the cleanup activities in Areas I and II administered by NASA. The remedial action implementation work plan will be subject to DTSC review and approval.

- Scheduled completion of soils cleanup remains as 2017

- NASA's commitment to cleanup to local background applies to soils and not to groundwater at the site. Investigation and remediation of groundwater will be separately addressed, and provisions related to investigation and remediation of groundwater will be incorporated into a final agreement.

- Characterization and cleanup for chemical contaminants of both soils and groundwater are subject to DTSC approval.

- Final agreement between NASA and California, and the cleanup obligations within that agreement, will be legally binding and enforceable and embodied in an administrative order on consent (AOC).

- DTSC and NASA will develop a technical protocol for implementation of these principles and a protocol for resolving disputes that are similar to protocols agreed upon by DTSC and the U.S. Department of Energy with respect to Area IV.

- DTSC work to be fully funded by NASA.

- DTSC will conduct a public participation process to receive public input regarding the agreement prior to its finalization. This process will include a formal comment period and may include public meetings or discussions.

- DTSC will work with NASA to develop an approach for satisfying any applicable NEPA obligations.

- This agreement in principle concerns SSFL Areas I and II administered by NASA only and is between NASA and the State of California represented by the Department of Toxic Substances Control and the California Environmental Protection Agency. The framework is based upon the unique circumstances of Areas I and II administered by NASA, including the nature of the releases of chemical contamination that have occurred at Areas I and II administered by NASA. This framework does not establish precedent and shall not be used as precedent for any other agreement for any other area within the SSFL.